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HART CROWSER

Earth and Environmental Technologies

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FAX Transmittal

DATE January 12, 2000

RECIPIENT'S FAX NO. 503-240-2009

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SEND TO John Childs

COMPANY Port of Portland

RECIPIENT'S DIRECT TELEPHONE NO.

SENDER'S NAME Keith Krueger

JOB NO. J-15045

MESSAGE:

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www.hartcrowser.com

Anchorage

January 11, 2001

Mr. John Childs
Project Manager, Environmental Resources
Port of Portland
P.O. Box 3529
Portland, Oregon 97208

Boston

Re: Sampling and Analysis Plan for the Terminal 5, Berth 503, and Terminal 6,
Berths 603-605 Water Quality Monitoring Program
J-15045

Chicago

Dear Mr. Childs,

Denver

Hart Crowser is pleased to present this Sampling and Analysis Plan (SAP) to conduct a field sampling and chemical analysis program that characterizes the water quality during the dredging of Terminal 5, Berth 503, and Terminal 6, Berths 603-605, sediments.

Fairbanks

INTRODUCTION

Hart Crowser understands that the Port of Portland is going to dredge sediments at Terminal 5, Berth 503, and Terminal 6, Berths 603-605, and discharge this material to the sediment rehandling facility located near Suttle Road. The purpose of this SAP is to present the procedures Hart Crowser will use to collect water quality data during dredging at these berths.

Jersey City

Juneau

PROGRAM OBJECTIVES

The objectives of the SAP are to:

Long Beach

- Monitor the physical parameters of the water column during dredging. Physical parameters include conductivity, dissolved oxygen, pH, temperature, and turbidity at the top, middle, and bottom of the water column using the Seabird® CTD water quality monitoring instrument.

Portland

Seattle



Port of Portland
January 11, 2001

J-15045
Page 2

- Collect and chemically analyze site water samples for tributyltin (TBT) (total and dissolved), pesticides, polychlorinated biphenyls (PCBs), and total suspended solids (TSS) from the middle of the water column.

WATER QUALITY MONITORING PROGRAM AND WATER SAMPLE COLLECTION, HANDLING, AND CHEMICAL ANALYSIS PROCEDURES

Descriptions of the water quality monitoring program and water sample collection, handling, and chemical analysis procedures are detailed below.

Dredge Site Field Parameter Monitoring using the Seabird® CTD

The water quality monitoring program will include a total of five days of monitoring field parameters using the Seabird® CTD. The Seabird® CTD profiles will be obtained at five distinct stations at each terminal to characterize the dredge plume characteristics. As presented on Figure 1, the physical parameter monitoring locations will be located:

- One location approximately 500 feet upstream of the point of dredging (outside of plume) to be representative of site background conditions;
- One location approximately 50 feet downstream of the point of dredging;
- Two locations approximately 100 feet downstream of the point of dredging; and
- One location approximately 250 feet downstream of the point of dredging.

These proposed monitoring stations might be altered based on site conditions, the location of the turbidity plume, and any differing requirements stated in the DEQ 401 Water Quality Certificate that has yet to be obtained by the Port.

Dredge Site Sampling of Mid-Water Column for Contaminants of Concern

Hart Crowser will assist the Port in assessing site water quality during dredging activities for the absence or presence of chemical contamination. Water samples will be collected from the middle of the water column at locations to be determined on-site based on total water depth. At Berths 603-605, the chemical sampling program will include two days of sampling from one upstream and two downstream locations, yielding a total of six water samples. At Berth 503, the chemical sampling program will include two upstream and two downstream locations, yielding a total of four water samples.



Port of Portland
January 11, 2001

J-15045
Page 3

Water samples will be collected using a Niskin bottle. The Niskin bottle is a vertical sampling tube that is lowered through the water column by means of a sampling line to the desired sampling depth. The bottle is then closed with the assistance of a trip weight. When the sampler is full, the water will be retrieved and transferred into pre-cleaned sample containers, labeled, and placed immediately into cooled ice chests until transported to the chemical laboratory. Labels will include the project name, sample identification number, type of analysis to be performed, date and time of sampling, and initials of person(s) preparing the sample, and will be referenced by entry into the logbook. Samples will be stored at approximately 4°C until delivered to the analytical laboratory.

The ten water samples will be submitted to Columbia Analytical Services, Inc., (CAS) in Kelso, Washington for analysis of total and dissolved TBT, pesticides, PCBs, and total suspended solids (TSS). Samples intended for dissolved TBT analysis will be filtered in the field using a peristaltic pump and in-line 0.45 micron filter. CAS will handle and analyze the submitted water samples in accordance with DEQ/EPA analytical testing protocols and QA/QC requirements. A written report of analytical results and QA/QC data will be prepared by CAS and included as an appendix in the final report.

LABORATORY CHEMICAL ANALYSIS

Laboratory testing procedures will be consistent with chemical analyses protocols and detection limit goals presented in Table 8B of the *"Sampling and Analysis Plan for Dredge Material Characterization Terminal 6, Berths 603-605, and Terminal 5, Berth 503"* prepared by Hart Crowser (September 22, 2000). In addition, the Quality Assurance/Quality Control (QA/QC) procedures described in Sections 7.3 through 7.3.6 of the SAP will be implemented during the water quality monitoring program to ensure sample integrity and data quality.

REPORTING

Hart Crowser will prepare a written report documenting all activities associated with monitoring, collection, transportation, and analysis of water samples. The chemical testing report from the analytical laboratory will be included as an appendix. At a minimum, the following will be included in the final report:



Port of Portland
January 11, 2001

J-15045
Page 4

- The type of sampling equipment used;
- Protocols and procedures used during sampling and testing, and an explanation of any deviations from the sampling plan protocols;
- Maps identifying locations where the monitoring and water samples were collected;
- Chain of custody procedures used, and an explanation of any deviations from the sampling plan procedures;
- A tabular and graphical summary of physical parameter data collected by the Seabird[®] CTD; and
- A tabular summary of the chemical testing results, and comparison to relevant state and federal water quality screening criteria.

If you have any questions regarding this SAP, please do not hesitate to contact either of us at (503) 620-7284.

Sincerely,

HART CROWSER, INC.

KEITH A. KROEGER
Staff Aquatic Toxicologist

HOWARD L. CUMBERLAND
Associate

Attachments: Figure 1 - Monitoring Locations



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Northwest Region
7600 Sand Point Way N.E., Bldg. 1
Seattle, WA 98115

Refer to:
OSB2000-0311 (COE No. 2000-00950)
OSB2000-0299 (COE No. OYA-1-008760)

January 9, 2001

Mr. Lawrence C. Evans
Chief, Regulatory Branch
Corps of Engineers, Portland District
ATTN: Judy Linton
P.O. Box 2946
Portland, Oregon 97232

Re: Endangered Species Act and Magnuson-Stevens Act Consultation for Corps of
Engineers' Permit ID Nos. 2000-00950 and OYA-1-008760

Dear Mr. Evans:

This responds to your November 15, 2000, letter to Michael Crouse requesting informal consultation under the Endangered Species Act (ESA) and Magnuson-Stevens Act on the Corps of Engineers' (Corps) issuance of two permits (Nos. 2000-00950 and OYA-1-008760) under Section 404(b)(1) of the Clean Water Act and Section 10 of the Rivers and Harbors Act. The Corps has determined that these activities would not likely adversely affect Lower Columbia River steelhead (*Oncorhynchus mykiss*), Lower Columbia River chinook salmon (*O. tshawytscha*), Upper Willamette River chinook salmon (*O. tshawytscha*), Snake River spring/summer chinook salmon (*O. tshawytscha*), Snake River fall chinook salmon (*O. tshawytscha*), Upper Columbia River spring chinook salmon (*O. tshawytscha*), Snake River steelhead (*O. mykiss*), Upper Columbia River steelhead (*O. mykiss*), Columbia River chum salmon (*O. keta*), and Upper Willamette River steelhead (*O. mykiss*). Descriptions of the proposed actions are found in Table 1.

This consultation is undertaken pursuant to section 7(a)(2) of the ESA and its implementing regulations, 50 CFR Part 402. In addition, this document also serves as consultation on Essential Fish Habitat (EFH) for coho salmon (*O. kisutch*), chinook salmon and starry flounder (*Platyichthys stellatus*) under the Magnuson-Stevens Act and its implementing regulations (50 CFR Part 600).

The NMFS concurs with the COE's determination that proposed projects are not likely to adversely affect the listed species because: 1) Due to run timing, site conditions, and local abundance, listed species are unlikely to occur in the vicinity during the proposed dredging period; 2) proposed dredging methods will minimize any potential entrainment of listed fish; 3) sediments have been tested and meet guidelines of the Lower Columbia River Dredged Material Evaluation Framework; and 4) return water from the upland sites will meet Oregon Department



of Environmental Quality standards. Therefore, NMFS believes there is less than a negligible likelihood of incidental take of listed salmonids occurring due to these proposed actions.

Table 1. Proposed actions.

<i>COE #</i>	<i>Stream</i>	<i>Location</i>	<i>Project Description and Minimization Measures</i>
2000-00950	Columbia River	River mile 102.5 at Portland, Oregon	The proposed action involves maintenance dredging at Terminal 6 using a clamshell dredge to a depth of -40 feet. Material will be disposed of at an upland rehandling site. Removal will occur in the approved work window.
OYA-1-008760	Willamette River	River mile 1st Portland, Oregon	The proposed action involves maintenance dredging at Terminal 5 using a clamshell dredge to a depth of -42 feet. Material will be disposed of at an upland rehandling facility. Removal will occur during the approved work window.

The COE must reinitiate consultation if: (1) New information reveals that effects of the actions may affect listed species in a way not previously considered, (2) the actions are modified in a way that causes an effect on listed species that was not previously considered, or (3) a new species is listed or critical habitat is designated that may be affected by the actions (50 CFR 402.16).

The COE should also be aware that NMFS has concerns about the adequacy of the Lower Columbia River Dredged Material Evaluation Framework in protecting salmonids from exposure to contaminants. As new criteria are developed and established, further testing of sediments in dredging areas may be required and additional restrictions imposed on future and existing permits.

ESSENTIAL FISH HABITAT CONSULTATION

The Pacific Fisheries Management Council (PFMC) is one of eight regional fishery management councils established under the Magnuson-Stevens Act. PFMC develops and carries out fisheries management plans for salmon, groundfish and coastal pelagic species off the coasts of Washington, Oregon and California, and recommends Pacific halibut harvest regulations to the International Pacific Halibut Commission.

As required by the Magnuson-Stevens Act, PFMC described and identified EFH in each of its fisheries management plans. EFH includes "those waters and substrates necessary to fish for spawning, breeding, feeding, or growth to maturity." The Columbia River estuary and the Pacific Ocean off the mouth of the Columbia River were designated as EFH for groundfish and

coastal pelagic species,¹ and all streams, lakes, ponds, wetlands, and other water bodies currently, or historically accessible to salmon in Washington, Oregon, Idaho, and California are designated as EFH for salmon.²

The Magnuson-Stevens Act also established an EFH consultation process. Federal agencies are required to consult with NMFS on all actions that may adversely affect EFH. The NMFS interprets the scope of these consultations to include actions by Federal agencies that occur outside designated EFH, such as upstream or upslope, but which nonetheless may have an adverse effect on habitat conditions necessary for the long-term survival of the species within EFH. The NMFS must provide conservation recommendations for any Federal or State activity that may adversely affect EFH. Within 30 days of receiving EFH conservation recommendations from the NMFS, Federal agencies must conclude EFH consultation by responding to NMFS with a written description of conservation measures the agency will use to avoid, mitigate or offset the impact of its action on EFH. If the Federal agency selects conservation measures which are inconsistent with the conservation recommendations of NMFS, the Federal agency must explain in writing its reasons for not following NMFS' recommendations.

The two proposed projects occur within the area designated as EFH for chinook and coho salmon, and starry flounder. Information submitted by the COE is sufficient to conclude that the effects of this project on EFH are likely to be within the range of effects considered in the Endangered Species Act portion of this consultation. Based on that analysis, the NMFS finds that the proposed project is unlikely to adversely affect EFH for coho salmon, chinook salmon and starry flounder. Because the project is not likely to adversely affect any designated EFH, the NMFS has no conservation recommendations to make at this time.

This concludes EFH consultation for the proposed projects along the Willamette River. The COE must reinitiate this EFH consultation if: 1) New information reveals effects of the agency action that may affect designated EFH in a manner or to an extent not considered in this consultation; 2) the agency action is subsequently modified in a manner that causes an effect to designated EFH not considered in this consultation; or 3) new EFH is designated that may be affected by the action.

¹ Pacific Fishery Management Council, Final Environmental Assessment/ Regulatory Review for Amendment 11 to the Pacific Coast Groundfish Fishery Management Plan (October 1998), and The Coastal Pelagic Species Fishery Management Plan: Amendment 8 (December 1998). See, also, Casillas, *et al.*, Essential Fish Habitat West Coast Groundfish Appendix, National Marine Fisheries Service, 778 p. (1988).

² Pacific Fishery Management Council, Amendment 14 to the Pacific Coast Salmon Plan. Appendix A: Description and Identification of Essential Fish Habitat, Adverse Impacts and Recommended Conservation Measures for Salmon (1999).

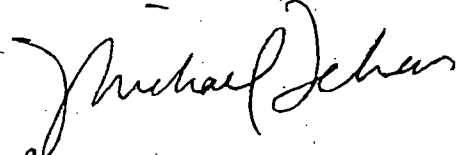
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If you have any questions, please contact Ben Meyer of my staff in the Oregon State Branch Office at 503.230.5425.

Sincerely,



for Donna Darn
Acting Regional Administrator